

**Amendment/Reply**

Applicant: Ian P. Schaeffer et al.

Serial No.: 10/654,177

Filed: September 3, 2003

Docket No.: 10002500-2

Title: A METHOD OF FABRICATING A SUBSTANTIALLY ZERO SIGNAL

DEGRADATION ELECTRICAL CONNECTION ON A PRINTED CIRCUIT BOARD

**REMARKS**

This Amendment/Reply accompanies a concurrently filed Request for Continued Examination (RCE) under 37 CFR § 1.114 and is in reply to the Final Office Action mailed February 7, 2006. Claims 14-23, 26-31 were rejected.

With this Response, claim 14 has been amended and claims 32-33 are newly presented. Claims 14-23, 26-33 remain pending in the application and are presented for consideration and allowance.

**Claim Rejections under 35 U.S.C. § 102**

Claims 14-23 and 26-31 were rejected under 35 U.S.C. § 102(b) as anticipated by Byle et al., U.S. Patent No. 6,320,139; however, the Office Action quoted section 102(e) as the basis for the rejections. It is believed that the rejections to the claims were intended to have been based on 35 U.S.C. § 102(e) since the Byle et al. Patent does not qualify as a prior art reference under 35 U.S.C. § 102(b). The following Remarks presume that claims 14-23 and 26-31 were rejected under 35 U.S.C. § 102(e).

The Byle et al. Patent teaches at column 2, lines 49-60 an electrical circuit board 10 that includes circuits 14 coupled to conductive traces 12. Traces 12 provide interconnections between devices 16 and circuits 14.

The Byle et al. Patent teaches at column 3, lines 1-14 that circuits 14 include trace elements 18 arranged such that heated liquefied solder 24 (*See Figure 3*) extends across a gap 20 between two trace elements 18. The Byle et al. teaches at column 4, lines 6-13 that enough soldering paste 24 must be deposited upon trace element 18 to bridge gap 20 between respective trace elements 18. **It is noted that both Figure 4 (a cross-sectional view of Figure 3) and Figure 6 (a cross-sectional view of Figure 5) teach that solder 24 extends fully and completely between respective trace elements 18.**

As clarified, the method of amended independent claim 14 includes providing a printed circuit board defined by a dielectric structure core having a first surface, the first surface including a first conducting pad having a first edge and a second conducting pad having a second edge separated from and adjoining the first edge of the first conducting pad, the adjoining edges of the first and second conducting pads defining therebetween a surface area of the first surface; and applying a solder paste on the first and second conducting pads

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and on the first surface of the dielectric structure core, the solder paste forming a solder bridge extending between the adjoining edges of the first and second conducting pads that covers less than an entirety of the surface area between the adjoining edges of the first and second conducting pads to form a substantially zero signal degradation electrical connection between the first and second conducting pads.

It is respectfully submitted that the Byle et al. Patent does not teach or suggest a solder bridge extending between adjoining edges of first and second conducting pads that covers less than an entirety of a surface area defined between the adjoining edges of the first and second conducting pads, as recited by amended independent claim 14.

Claims 15-23 and 26-31 further define patentably distinct amended independent claim 14. Thus, these dependent claims are also believed to be allowable.

Therefore, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 102 rejections to claims 14-23 and 26-31, and respectfully request allowance of claims 14-23 and 26-31.

**New Claims**

New claims 32 and 33 further define patentably distinct amended independent claim 14, and are therefore likewise believed to be allowable.

Therefore, Applicants respectfully request allowance of new claims 32 and 33.

**CONCLUSION**

In view of the above, Applicants respectfully submit that pending claims 14-23, 26-33 recite patentable subject matter not taught or suggested by the cited references, and are in form for allowance. Therefore, reconsideration and withdrawal of the rejections to claims 14-23, 26-31 and allowance of claims 14-23, 26-33 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if other fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to telephone the Applicants' representative at the below-listed numbers to facilitate prosecution of this application.

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Respectfully submitted,

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**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted via telefacsimile to the United States Patent and Trademark Office at Fax No. (571) 273-8300 on this 7<sup>th</sup> day of June, 2006.

By

Name: Patrick G. Billig